

## CLAIMS

I claim:

1. A method in one or more computer systems for identifying auctions offering the same item, comprising:

displaying information about a first auction, the information including a description of a first item offered in the first auction;

receiving user input requesting information about other auctions offering items that are the same as the first item; *Not shown*

determining, for the description of the first item among descriptions of items offered in a group of auctions including the first auction, the inverse document frequency of terms occurring within the description of the first item;

selecting a plurality of terms within the description of the first item having the largest inverse document frequencies;

for each of the selected terms, conducting a search for auctions in the group whose item descriptions contain the selected term;

for each auction found in at least one of the conducted searches, determining which of the selected terms occur in the auction's item description;

identifying as an auction offering an item that is the same as the first item an auction among the found auctions where the sum of the inverse document frequencies of the selected terms that occur in the item description for the auction exceeds a threshold; and *112*

displaying information about the identified auction.

2. A method in a computer system for identifying purchasing opportunities within a set of purchasing opportunities that are similar to a distinguished purchasing opportunity, the distinguished purchasing opportunity having descriptive information associated with it, comprising:

5 for each of a plurality of terms occurring in the descriptive information  
6 associated with the distinguished purchasing opportunity, generating a term score  
7 reflecting the extent to which the occurrence of the term in the descriptive information  
8 associated with the distinguished purchasing opportunity differentiates the distinguished  
9 purchasing opportunity from other purchasing opportunities in the set;

10 selecting as key words a plurality of terms having the highest term scores;

11 identifying purchasing opportunities of the set containing key words; and

12 establishing a purchasing opportunity score for each identified purchasing  
13 opportunity by summing the term score of the key words occurring in descriptive  
14 information associated with the identified purchasing opportunities.

1 ✓ 3. The method of claim 2 wherein generating a term score for each term  
2 includes determining the fraction of occurrences of the term in descriptive information  
3 associated with the purchasing opportunities of the set that occur in the descriptive  
4 information associated with the distinguished purchasing opportunity.

1 ✓ 4. The method of claim 2 wherein identifying purchasing opportunities  
2 of the set containing key words includes performing a separate search for purchasing  
3 opportunities whose descriptive information includes each key word to produce a search  
4 result.

1 ✓ 5. The method of claim 4, further comprising determining which key  
2 words occur in the descriptive information associated with each purchasing opportunities  
3 based upon which of the produced search results contain the purchasing opportunity.

1 ✓ 6. The method of claim 2 wherein the distinguished purchasing  
2 opportunity and at least a subset of the purchasing opportunities of the set are of one or  
3 more purchasing opportunity types selected from the group consisting of:

4 store;

5 classified sale;

6 auction;  
7 reverse auction; and  
8 purchase aggregation.

1 ✓ 7. The method of claim 2, further comprising selecting the  
2 distinguished purchasing opportunity in response to a user request to display information  
3 about the distinguished purchasing opportunity.

1 ✓ 8. The method of claim 2, further comprising selecting the  
2 distinguished purchasing opportunity in response to the exercise of the distinguished  
3 purchasing opportunity by a selected user.

1 ✓ 9. The method of claim 8, further comprising selecting the  
2 distinguished purchasing opportunity in response to the purchase by the selected user of  
3 an item offered in the distinguished purchasing opportunity.

1 ✓ 10. The method of claim 8, further comprising selecting the  
2 distinguished purchasing opportunity in response to a bid by the selected user on an item  
3 offered in the distinguished purchasing opportunity.

1 ✓ 11. The method of claim 2, further comprising, in response to a user  
2 request for information about a purchasing opportunity similar to the distinguished  
3 purchasing opportunity, displaying information about the identified purchasing  
4 opportunity having the largest purchasing opportunity score.

1 ✓ 12. The method of claim 2, further comprising, in response to a user  
2 request for information about the distinguished purchasing opportunity, displaying  
3 information about the identified purchasing opportunity having the largest purchasing  
4 opportunity score in conjunction with displaying information about the distinguished  
5 purchasing opportunity.

Species

shown?  
not in fig  
5-c?

not shown  
not in figs  
5-c?

1 ✓ 13. The method of claim 2, further comprising displaying at least a  
2 portion of the identified purchasing opportunities in the order of their purchasing  
3 opportunity scores.

1 ✓ 14. The method of claim 2, further comprising displaying a proper  
2 subset of the identified purchasing opportunities whose purchasing opportunity scores  
3 each exceed a minimum threshold.

1 ✓ 15. The method of claim 14 wherein the displaying displays a  
2 predetermined fixed number of the identified purchasing opportunities.

1 ✓ 16. The method of claim 14 wherein the displaying displays all of the  
2 identified purchasing opportunities whose purchasing opportunity scores each exceed the  
3 minimum threshold.

1 ✓ 17. The method of claim 2 wherein a predetermined fixed number of key  
2 words are selected.

1 ✓ 18. The method of claim 2 wherein a number of terms that is a  
2 predetermined fraction of the number of terms occurring in the descriptive information  
3 associated with the distinguished purchasing opportunity are selected as key words.

1 ✓ 19. The method of claim 2 wherein all of the terms whose term scores  
2 exceed a minimum threshold are selected as key words.

1 ✓ 20. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes the purchasing  
3 opportunity type of the distinguished purchasing opportunity.

1 21. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes an item name of an  
3 item offered in the distinguished purchasing opportunity.

1 22. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes an item description of  
3 an item offered in the distinguished purchasing opportunity.

1 23. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes a price at which an  
3 item is offered in the distinguished purchasing opportunity.

1 24. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes a seller identity of the  
3 distinguished purchasing opportunity.

1 25. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes a seller location of the  
3 distinguished purchasing opportunity.

1 26. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes availability of an item  
3 offered in the distinguished purchasing opportunity.

1 27. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes shipping terms for an  
3 item offered in the distinguished purchasing opportunity.

1 28. The method of claim 2 wherein the descriptive information  
2 associated with the distinguished purchasing opportunity includes forms of payment  
3 accepted for the distinguished purchasing opportunity.

1 29. The method of claim 2 wherein distinguished purchasing opportunity  
2 is an auction, and wherein the descriptive information associated with the distinguished  
3 purchasing opportunity includes the closing date of the auction.

1 30. The method of claim 2 wherein a distinguished item is offered for  
2 purchase in the distinguished purchasing opportunity, and wherein the descriptive  
3 information associated with the distinguished purchasing opportunity includes a publisher  
4 of the distinguished item. NS

1 31. The method of claim 2 wherein a distinguished item is offered for  
2 purchase in the distinguished purchasing opportunity, and wherein the descriptive  
3 information associated with the distinguished purchasing opportunity includes an author  
4 of the distinguished item. NS

1 32. The method of claim 2 wherein a distinguished item is offered for  
2 purchase in the distinguished purchasing opportunity, and wherein the descriptive  
3 information associated with the distinguished purchasing opportunity includes an artist of  
4 the distinguished item.

1 33. The method of claim 2 wherein a distinguished item is offered for  
2 purchase in the distinguished purchasing opportunity, and wherein the descriptive  
3 information associated with the distinguished purchasing opportunity includes a  
4 performer of the distinguished item.

1           34. The method of claim 2 wherein a distinguished item is offered for  
2 purchase in the distinguished purchasing opportunity, and wherein the descriptive  
3 information associated with the distinguished purchasing opportunity includes a size of  
4 the distinguished item.

1           35. The method of claim 2 wherein a distinguished item is offered for  
2 purchase in the distinguished purchasing opportunity, and wherein the descriptive  
3 information associated with the distinguished purchasing opportunity includes a color of  
4 the distinguished item.

1           36. The method of claim 2 wherein a distinguished item is offered for  
2 purchase in the distinguished purchasing opportunity, and wherein the descriptive  
3 information associated with the distinguished purchasing opportunity includes a style of  
4 the distinguished item.

1           37. A computer-readable medium whose contents cause a computer  
2 system to identify purchasing opportunities within a set of purchasing opportunities that  
3 are similar to a distinguished purchasing opportunity, the distinguished purchasing  
4 opportunity having descriptive information associated with it, by:

5           for each of a plurality of terms occurring in the descriptive information  
6 associated with the distinguished purchasing opportunity, generating a term score  
7 reflecting the extent to which the occurrence of the term in the descriptive information  
8 associated with the distinguished purchasing opportunity differentiates the distinguished  
9 purchasing opportunity from other purchasing opportunity in the set;

10          selecting as key words a plurality of terms having the highest term scores;  
11          identifying purchasing opportunities of the set containing key words; and  
12          establishing a purchasing opportunity score for each identified purchasing  
13 opportunity by summing the term score of the key words occurring in information  
14 associated with the identified purchasing opportunities.

1        ✓ 38. The computer-readable medium of claim 37 wherein generating a  
2 term score for each term includes determining the fraction of occurrences of the term in  
3 information associated with the purchasing opportunities of the set that occur in the  
4 information associated with the distinguished purchasing opportunity.

1        ✓ 39. The computer-readable medium of claim 37 wherein the contents of  
2 the computer-readable medium further cause the computer system to display at least a  
3 portion of the identified purchasing opportunities in the order of their purchasing  
4 opportunity scores.

1        ✓ 40. The computer-readable medium of claim 37 wherein the contents of  
2 the computer-readable medium further cause the computer system to display a proper  
3 subset of the identified purchasing opportunities whose purchasing opportunity scores  
4 each exceed a minimum threshold.

1        ✓ 41. A data processing system for scoring purchasing opportunities within  
2 a set of purchasing opportunities in terms of their similarity to a distinguished purchasing  
3 opportunity, the distinguished purchasing opportunity having descriptive information  
4 associated with it, comprising:

5                a term score generator that, for each of a plurality of terms occurring in the  
6 descriptive information associated with the distinguished purchasing opportunity,  
7 generates a term score reflecting the extent to which the occurrence of the term in the  
8 descriptive information associated with the distinguished purchasing opportunity  
9 differentiates the distinguished purchasing opportunity from other purchasing opportunity  
10 in the set;

11                a key word selection subsystem that selects as key words a plurality of  
12 terms having the highest term scores;

13                a purchasing opportunity identification subsystem that identifies purchasing  
14 opportunities of the set containing key words; and



15 a purchasing opportunity score that establishes a purchasing opportunity  
16 score for each identified purchasing opportunity by summing the term score of the key  
17 words occurring in information associated with the identified purchasing opportunities.

1 ✓ 42. A method in a computer system for identifying documents in a set of  
2 documents relevant to a distinguished document, comprising:

3 identifying key words within the distinguished document; and  
4 ranking documents of the set based upon which of the identified key words  
5 they contain.

1 ✓ 43. The method of claim 42 further comprising performing a separate  
2 search for each of the identified keywords.

1 ✓ 44. The method of claim 42 wherein the ranking is further based upon,  
2 for each key word, the fraction of occurrences of the key word in the set of documents  
3 that occur in the distinguished document.

1 ✓ 45. The method of claim 42 wherein the identifying identifies words  
2 within the distinguished documents that occur with the highest frequencies in the  
3 distinguished document relative to the frequencies with which they occur in the set of  
4 documents as a whole.

1 ✓ 46. The method of claim 42 wherein the distinguished and ranked  
2 elements each describe a purchasing opportunity

1 ✓ 47. The method of claim 42 wherein the distinguished and ranked  
2 documents each describe an online auction.

1 ✓ 48. A computer-readable medium whose contents cause a computer  
2 system to identify documents in a set of documents relevant to a distinguished document,  
3 by

4 identifying key words within the distinguished document and  
5 ranking documents of the set based upon which of the identified key words  
6 they contain.

1 ✓ 49. The computer-readable medium of claim 48 wherein the contents of  
2 the computer-readable medium further cause the computer system to perform a separate  
3 search for each of the identified keywords.

1 ✓ 50. The computer-readable medium of claim 48 wherein the ranking is  
2 further based upon, for each key word, the fraction of occurrences of the key word in the  
3 set of documents that occur in the distinguished document.

1 ✓ 51. The computer-readable medium of claim 48 wherein the identifying  
2 identifies words within the distinguished documents that occur with the highest  
3 frequencies in the distinguished document relative to the frequencies with which they  
4 occur in the set of documents as a whole.

1 ✓ 52. The computer-readable medium of claim 48 wherein the  
2 distinguished and ranked documents each describe a purchasing opportunity.

1 ✓ 53. The computer-readable medium of claim 48 wherein the  
2 distinguished and ranked documents each describe an online auction.

1 54. A computer memory containing a purchasing opportunity ranking  
2 data structure, comprising a plurality entries, each entry comprising an indication of a  
3 purchasing opportunity and an indication of a purchasing opportunity score indicating a  
4 level of similarity between the purchasing opportunity and a selected purchasing  
5 opportunity.

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